

# Observations from a water bird colony, Lake Tana Ethiopia

by *Sigrun Klug and Jeffery Boswall*

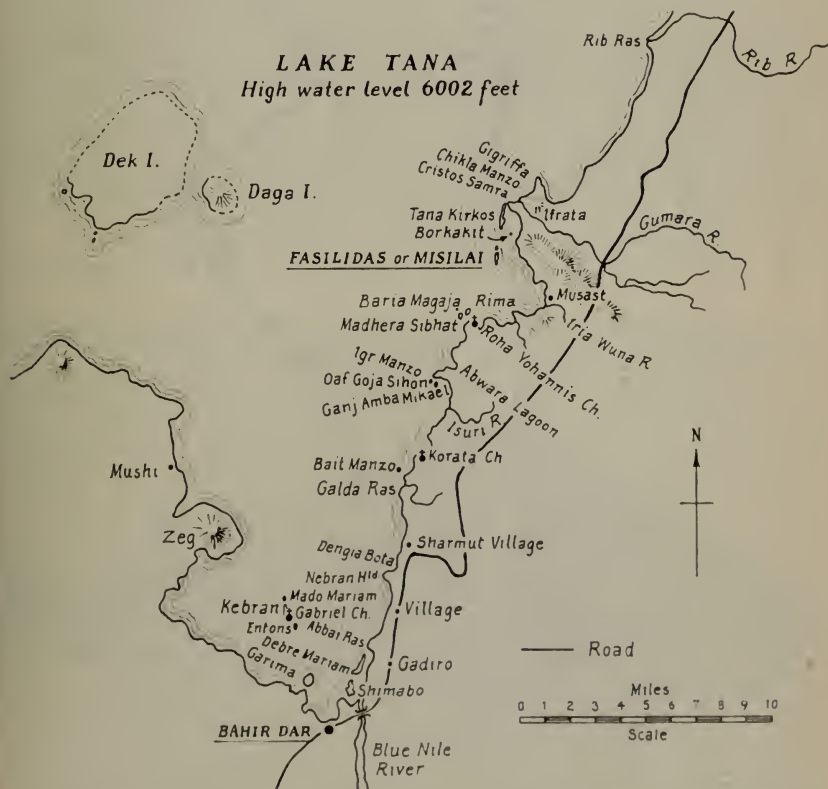
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## INTRODUCTION

In company with Captain Getachew Taffera and Douglas Fisher we were resident on Fasilidas Island in Lake Tana, Begemder Province, Ethiopia, from 7th to 12th October, 1969. The purpose of the visit was to film the water-bird colony there for BBC television, and this occupied most of our attention. However, time was found to make certain ornithological and botanical observations and these are set out in this paper.

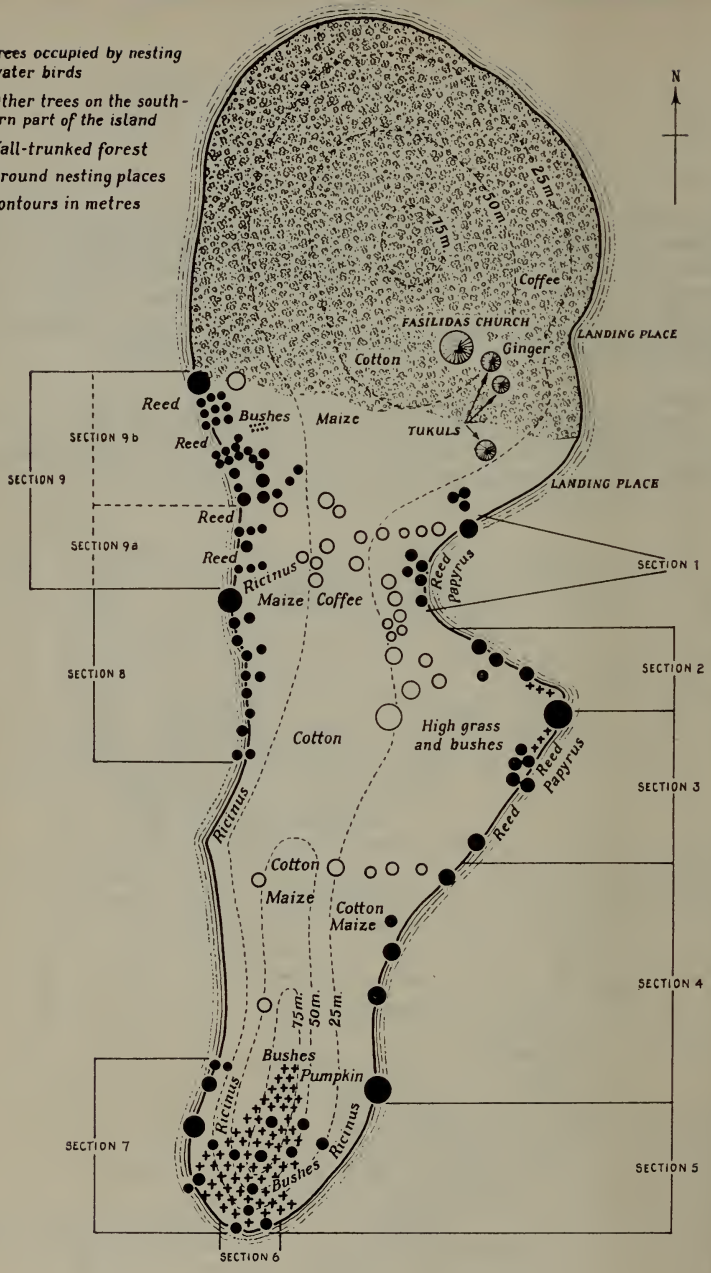
### *The Island*

The island is about 43 kilometres by water from Bahir Dar, the main town on the shores of Lake Tana. The lake itself is a thousand square miles in extent and lies at 6,000 feet in the northern highlands of Ethiopia. There are



The South-eastern part of Lake Tana, Ethiopia, to show the position of Fasilidas Island in relation to Bahir Dar. Based on part of the map in Cheesman (1936), with amendments. Drawn by Eric Robson.

- Trees occupied by nesting water birds
- Other trees on the southern part of the island
- ⊕ Tall-trunked forest
- + Ground nesting places
- Contours in metres



Fasilidas Island, Lake Tana, to show distribution of nesting birds. Re-drawn from S.K.'s original field sketches by Eric Robson. The sections of the coast refer to photographs taken from a boat, and deposited in the Edward Grey Institute of Field Ornithology at Oxford, and at the Staatliches Museum für Naturkunde in Stuttgart.

many islands in the lake, particularly round the shore, and these were first mapped in detail by Cheesman (1936). He refers to the island with the water-bird colony as Misilai Island, mentioning also that the one remaining church was called Fasilidas. Currently the island is referred to locally as Fasilidas. It is about 900 metres long, and an average of 250 metres wide; at its highest points it rises to about 75 metres above the level of the lake. These measurements are very approximate. Its main axis lies almost exactly north-south. Immediately to the north is a small "extension" island across perhaps 100 metres of water, and several kilometres further north is the better-known island called Tana Kirkos. Fasilidas lies one or two kilometres off the eastern shore of Lake Tana.

#### *Previous ornithological observations*

Cheesman (1936: 171) first visited the island on 1st April, 1933, and mention is made of a colony of the Little Egret *Egretta garzetta* in Cheesman and Sclater (1935-36), but see under Yellow-billed Egret *Egretta intermedia* in "Notes on Species" below. Observations by Dr. F. Schäuuffele are summarised by Schäuuffele and Schüz (1968), and Schüz (1969) describes the results of his own one-day visit on 21st October, 1967.

#### *The vegetation*

The normal vegetation on the mainland shore of Lake Tana shows a picture that can be found in parkland or savannas with very big, single standing trees (mostly *Ficus vasta*, *F. dabra*, *Cordia africana*), bush-forests with many different species, Leguminosae of different kinds, but only a few Acacia trees (*Combretum*, *Terminalia*, *Gardenia*, *Cussonia*, *Croton*, *Dombeya*), bushes with many tendrils, and thorn scrub *Acanthus polystachius* and *Solanum campylacanthum*. Tall-trunked forests are seen near Bahir Dar only on Kevran (=Kebran) and Enton islands. The vegetation near the water is either papyrus and reed or trees, mostly Dokoma trees (*Syzygium guineense*). On the bark of these trees grow many ferns, mosses and orchids. In the deeper water a white



The southernmost tip of the island, i.e. section 6 on the map. The species visible include Sacred Ibis and Openbill Stork, 12th October, 1969. Photo: J. Boswall.



flowering bush *Kanalia laniflora* (Asclepidaceae) can be found. This description of the vegetation is based on O. Sebald (1968); see also Cufondotis (1968).

The vegetation of Fasilidas Island appeared to be in no way significantly different from that which is described for the mainland shore. On the shore of Fasilidas Island there are a lot of Dokoma trees with fern and moss and a few wild fig trees. Papyrus and reed grow round the small bay on the eastern



Part of the main Sacred Ibis colony, looking south-west by south. Openbill Storks are also visible, 12th October, 1969. Photo: J. Boswall.



Nesting trees on the west coast of Fasilidas Island: White-necked Cormorants, Long-tailed Cormorants and Yellow-billed Egrets are visible, 12th October, 1969. Photo: J. Boswall.

side, and on the south-east facing shore; but on the western side papyrus and reed are scanty. The northern part of the island is covered with a tall-trunked forest. On the southern part of the island the vegetation is much more scanty, because of the rocky nature of the terrain. Among these wild growing plants the human inhabitants (the priest Abe Wolde Jesus and a number of boys) are trying to cultivate maize, cotton, coffee and ginger in all parts on the island where it is possible.

The water birds, which are nesting in trees, prefer the waterside ones. In fact, every tree round the shore of the southern part of the island is occupied by birds. On the northern part no nesting birds were seen, only a number of resting Night Herons *Nycticorax nycticorax*. The birds which nest on "inland" trees do not choose a special kind of tree; so there is no apparent correlation between specific vegetation and nesting places. The choice of Fasilidas Island itself must surely be independent of the vegetation type. More probable influences are proximity to a particularly favourable feeding area on or near the mainland shore, and the number and behaviour of the island's human residents at the time of the original colonisation.

#### *The water-birds*

The ornithology of the island is dominated by a mixed colony of several thousand pairs of water birds of eleven species:

White-necked Cormorant *Phalacrocorax carbo*

Long-tailed Cormorant *P. africanus*

Darter *Anhinga rufa*

Black-headed Heron *Ardea melanocephala*

Yellow-billed Egret *Egretta intermedia*

Cattle Egret *Bubulcus ibis*

Squacco Heron *Ardeola ralloides*

Night Heron *Nycticorax nycticorax*

Open-billed Stork *Anastomus lamelligerus*

Sacred Ibis *Threskiornis aethiopicus*

African Spoonbill *Platalea alba*

Praed and Grant (1952) specifically mention that Long-tailed Cormorants, Darters, Yellow-billed Egrets, Cattle Egrets, Night Herons and Sacred Ibises are known to nest in company with other species. Of the remaining five, J. B. has seen Black-headed Herons and Squacco Herons in a mixed colony in April, 1969, at the Hot Springs of the Awash National Park in Ethiopia. Feely (1964) saw Black-headed Herons, Openbills, African Spoonbills and three other water-bird species nesting together in Zambia; and in the same country Benson and Irwin (1967) mention a mixed colony of at least seven species including Squacco Heron, Night Heron, Long-tailed Cormorant and Openbill. It seems likely that White-necked Cormorants nest with other species. [Communal nesting by Long-tailed Cormorants, Darters and Cattle Egrets has been established by Bowen *et al.* (1962)].

Two of the species had not previously been recorded as nesting on Fasilidas: the Cattle Egret and the Squacco Heron.

With the exception of the Sacred Ibis, most of which were breeding on rocks and only a few in trees, all species were nesting arboreally. As to the distribution of the birds, it must be emphasised that it is only the southern two-thirds of the island that is favoured by the birds. Secondly, it is clear that, regardless of the species of trees, the birds prefer those closest to the water. Such waterside trees were usually occupied by a wide variety of species—a truly "mixed" colony. Only two species also nested on "inland"

trees: the Yellow-billed Egret and the African Spoonbill. The total number of trees occupied by birds was approximately 90 (see map).

One remarkable feature of the colony was the tameness of the birds. Only the closest approach would put them out of the trees. We were able to camp within 20 yards of a colony of *Platalea alba* without causing the slightest disturbance.

A few White-necked Cormorants were seen fishing casually in the immediate vicinity of Fasilidas, and a few individuals of several other species could be seen feeding on the rocky shore; otherwise the birds of all species except the least common ones, *Bubulcus ibis* and *Ardeola ralloides*, were seen to make regular flights to a mainland locality north-east by north of the island. A glance at Cheesman's map suggests that they must forage in the basin and estuary of the Gumara river (see map). The chosen course was the only one that seemed to be taken, and the regular "trafficking" to and fro was a marked feature of the birds' daily routine. The most conspicuous users of the "highway" were Yellow-billed Egret, African Spoonbill and Sacred Ibis. At dusk, and again at dawn, Night Herons followed the same flight path.

#### *Notes on species*

White-necked Cormorant *Phalacrocorax carbo*. About 40 pairs, feeding full-size young in nests sited near the tops of trees. Cheesman found it "plentiful on Lake Tana" but saw no evidence of nesting.

Long-tailed Cormorant *Phalacrocorax africanus*. So far as we could see, all the young had left the nest and were perched on tree branches; a few were seen in the water round the island. Those in the trees were being fed by parents, although they were fully grown. The number of *birds* (not pairs) estimated to be present was about 500. Almost all were immature, doubtless born this breeding season. A November female shot by Cheesman showed signs of having bred recently. He had no other evidence of nesting but assumed they must breed in the area.

Darter *Anhinga rufa*. About 15 pairs feeding young as large as themselves. The birds were occupying only two of the larger waterside trees. Praed and Grant (1952) say "They breed with Cormorants and Herons but there are generally not more than ten or twelve pairs of Darters in each colony". Cheesman thought they probably nested in the area.

Black-headed Heron *Ardea melanocephala*. About 30 pairs scattered round the waterbird colony. Almost full-size young, mostly in nests, being fed by adults. (There is a colony of perhaps 20 pairs in the trees around the church at Bahir Dar. J. B. saw considerable activity there in April, 1969, less in October.)

Great White Egret *Egretta alba*. Schäuffele and Schüz (1968), and Schüz (1969) say that a few may be breeding on Fasilidas, but no nests were found. We saw no birds of this species. Variability in the size of *E. intermedia* which we ourselves found initially puzzling may have led Schüz to suppose that *E. alba* might be present.

Little Egret *Egretta garzetta*. We agree with Schüz that Cheesman (in Cheesman and Sclater 1935-36) must have mistaken the nests of *E. intermedia* for *E. garzetta*. No birds were present during Cheesman's visit on 1st April: he saw only empty nests and corpses. (J. B. later saw a few Little Egrets feeding in pools alongside the road in the vicinity of the Gumara and Rib rivers.)

Yellow-billed Egret *Egretta intermedia*. Easily the commonest nesting water bird; probably something of the order of a thousand pairs, distributed



throughout the colony including some "inland" trees. The large majority of the offspring were almost as large as their parents and were moving about fairly freely in the tree tops. We would like to emphasise that we cannot be sure that all these birds were young of the season. If some were non-breeding one- or two-year olds, then our estimate of breeding pairs may be high. However, some young were smaller, a few very small, and in one tree eggs were seen. The larger young closely resembled the adults, having the same coloured soft parts (yellow bill, all black legs), but can best be distinguished by absence of "aigrette" feathers.

Cattle Egret *Bubulcus ibis*. Not previously recorded as a nester on Fasilidas. We estimated perhaps 25 pairs. Large young were being fed on nests or branches of trees, and a goodly number of newly-fledged (or possibly one- or two-year old non-breeding) Cattle Egrets were about the island.

Squacco Heron *Ardeola ralloides*. Not previously recorded nesting. Perhaps five pairs. Full size young in two trees on east side of island, one was receiving food from an adult.

Night Heron *Nycticorax nycticorax*. Well grown young on branches or in nests occasionally being fed by day. This species is very much less conspicuous, often hugging the "centres" of trees. "Perhaps 100 pairs" one of us thought until we kept watch from 05.40 to 06.40 hours on 12th October, and counted 868 Night Herons returning from a night's hunting! "400 pairs plus" we would now suggest. The return flight at dawn peaked at about 06.00 hours; the ten-minute totals for the hour's watch give 97, 357, 284, 109, 20 and 1. We observed sunrise over the distant low hills at 06.25 hours.

Openbill Stork *Anastomus lamelligerus*. Schüz estimated 15 pairs in 1967; we estimate 20 pairs. All were nesting in trees at the southernmost tip of the island. The visible young in the nest varied from naked creatures about 15 cms. long to feathered birds half the size of their parents.

Sacred Ibis *Threskiornis aethiopicus*. Number of nesting pairs difficult to estimate: perhaps about 500. Nests contained anything from unhatched eggs onwards; birds as big as their parents (except for the length of the bill) were fairly numerous, but none was seen to fly. A majority of offspring were probably three-quarters grown. Friedmann (1930) says "According to Zedlitz the breeding season of this bird in northern Ethiopia begins not earlier than May, while Erlanger judged that in southern Ethiopia it starts about the end of March". Emil K. Urban tells me that on Lake Shala in the Ethiopian Rift the birds nest in March, April and May. The main area for the species is on the ground on the central rocky spine at the south end of the island, though a few ground nesters can also be seen on the point opposite the landing place. Otherwise there are only scattered pairs on the trees.

African Spoonbill *Platalea alba*. Perhaps 30 of the 50 or so pairs were concentrated on some "inland" trees near the north-east corner of the colony; the rest were scattered singles in with the other species. Most young about three-quarters adult size, but some had left the nest and were still being fed.

#### *Other birds*

These included unidentified ducks, eagles, gulls, swallows, pigeons, starlings, sunbirds and other small passerines. A pair of Fish Eagles *Circus vocifer* were active at a nest. An Egyptian Goose *Alopochen aegyptiacus* was regularly seen at the same corner of the island and may have had a mate on eggs. Seven Crowned Cranes *Balearica pavonina*, several Pink-backed Pelicans *Pelecanus rufescens*, and an Osprey *Pandion haliaetus* were seen over the water. Three species of kingfisher observed were the Pied *Ceryle rudis*, the Pygmy *Ispidina picta* and the Grey-headed *Halcyon leucocephala*.

### Other vertebrates

Monitor Lizards *Varanus niloticus* were seen at intervals on the island. Grunting Hippopotami *Hippopotamus amphibius* were heard across the water from the mainland shore. We were told that a number had also recently been seen near Bahir Dar. It is clear that the species is not extinct in Lake Tana. As long ago as 1935, Cheesman wrote "A few Hippopotami are left in Lake Tana". An unidentified brown snake about one metre long was also observed on Fasilidas.

### SUMMARY

During the period 7th to 12th October, 1969, an attempt was made to census the water bird colony on Fasilidas Island, Lake Tana, Ethiopia.

Several thousand pairs of water birds of eleven species were nesting: *Phalacrocorax carbo* c. 40 pairs; *P. africanus* c. 500 birds (not pairs) mostly young ones; *Anbinga rufa* c. 15 pairs; *Ardea melanocephala* c. 30 pairs; *Egretta intermedia* very approximately 1,000 pairs; *Bubulcus ibis* c. 25 pairs; *Ardeola ralloides* c. 5 pairs; *Nycticorax nycticorax* c. 400 pairs; *Anastomus lamelligerus* c. 20 pairs; *Threskiornis aethiopicus* c. 500 pairs; *Platalea alba* c. 50 pairs. Most species were feeding large young.

### ZUSAMMENFASSUNG

Während eines Aufenthaltes auf der Fasilidas Insel (Tanasee, Äthiopien) vom 7-12 Oktober 1969 hatten wir Gelegenheit, die dort brütenden Wasservögel zu beobachten. Mehrere tausend Paare elf verschiedener Arten nisteten auf der Insel: *Phalacrocorax carbo* ca 40 Paare; *P. africanus* ca 500 Vogel (nicht Paare) meist ausgewachsene Jungvögel; *Anbinga rufa* ca 15 Paare; *Ardea melanocephala* ca 30 Paare; *Egretta intermedia* annähernd 1,000 Paare; *Bubulcus ibis* ca 25 Paare; *Ardeola ralloides* ca 5 Paare; *Nycticorax nycticorax* ca 400 Paare; *Anastomus lamelligerus* ca 20 Paare; *Threskiornis aethiopicus* ca 500 Paare. Alle diese Vögel nisteten im südlichen Teil der Insel. Während die Heiligen Ibis hauptsächlich auf der Felsen brüteten, bezogen die anderen Arten die entlang der Küste wachsenden Bäume als Nistplätze.

### ACKNOWLEDGMENTS

Dr. Friedrich Schäufler of the Felege-Hiwot Hospital at Bahir Dar first drew the attention of J. B. to the existence of the water bird colony on Fasilidas Island. Dr. E. Schüz commented helpfully on an earlier draft of the paper. Help with the botanical identification was received from Kurt Hildebrandt and Michael Gilbert. Eric Robson kindly drew the maps. The very helpful response of Lakew Berhane of the Department of Marine Head Office in Addis Ababa, and of the staff of the Lake Tana Transport Office at Bahir Dar, particularly Captain Tekle, is gratefully acknowledged.

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## The Daily Altitudinal Movement of the White-collared Pigeon *Columba albitorques* in the High Simien, Ethiopia

by Jeffery Boswall and Montagu Demment

Received 11th February, 1970

At the suggestion of Derek Goodwin we have prepared this note on a daily altitudinal movement of White-collared Pigeons *Columba albitorques*. It is one of the endemic highland species of Ethiopia and is found, according to Praed and Grant (1952) in "Eritrea to central Abyssinia". The High Simien is the loftiest mountain range in Ethiopia and includes the highest mountain in the Empire, Ras Dejen, 15,158 feet. The range is bounded on three sides by an escarpment that rises 5,000-odd feet from the lowlands below.

One of us, J. B., visited the Simien mountains in March and April 1965 and again from 16th October to 5th November 1969. M.D. was resident on the Geech plateau for most of the period August 1968 to November 1969. This short paper summarises the impressions of both of us.

The large majority of the observations were made from the Geech plateau. By day the birds are seen regularly on this plateau, which averages well over 12,000 feet, and also about the cliffs. In the afternoon some, if not all, the birds go down to the lowlands. Their headlong descent at high speed is a most spectacular piece of flying. In fact, to the uninitiated person, it can be quite frightening as the birds whizz past him, the wind whistling through their primaries. They usually fly within 20 feet of the slope and, on reaching a sheer precipice, drop and actually *fly* downwards at a speed that can hardly be less than 75 m.p.h., and could be more. The reason for the high speed could be to reduce the possibility of attacks by falcons.

On the afternoon of 30th October 1969 we kept watch from a point part way down the escarpment, at about 10,900 feet, just below a butress called Sederek and counted the birds. They thus hurtled down the slope towards us, wings held back, and dipped over the cliff edge out of sight, doubtless dropping most of the way to the lowlands below, though it was not possible to actually observe this due to the nature of the terrain. On 17th November M.D. watched from the top of the escarpment 2 kms. south-east of Sederek. The daily altitudinal range would thus be from about 12,000 feet to about 7,000 feet. The number of birds totalled for the two days, totalled for each half-hour from 14.00-14.30, to 17.30-18.00 hours were: 3, 9, 10, 16, 72, 56, 55 and 5. The frequency of party size, also totalled for the two days, was: singles, 36; two, 20; three, 7; four, 6; five, 1; six, 4; seven, 1; eight, 2; nine, 3; ten, 1; eleven, 2.

In the morning flocks of up to 50 birds, but usually of about 25, spiral their